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EXAMINER

HOSSAIN, TANIM M

ART UNIT PAPER NUMBER

2145

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/871,119

Applicant(s)

DAVIE ET AL.

Examiner

Tanim Hossain

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09242004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 10, 11, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Awadallah (U.S. 6,449,251) in view of Cisco Systems Incorporated (VoIP Call Admission Control Using RSVP).

As per claim 1, Awadallah teaches an intermediate network device for use in a computer network carrying network traffic, the intermediate network comprising: a traffic scheduler having one or more resources for use in forwarding network traffic received at the device at different rates (column 3, line 61 – column 4, line 11; column 7, lines 7-10, 38-45); a classification engine configured to identify received network traffic based upon pre-defined criteria (column 4, lines 25-33); and a resource reservation engine in communicating relationship with the traffic scheduler and the classification engine (column 4, lines 35-40; where the guaranteed bandwidth constitutes the existence of a resource reservation engine in communication with the router and classification engine). Awadallah does not specifically teach the reservation of resources for a traffic flow, without allowing immediate access to the resources. Cisco systems teaches the allocation by the resource reservation engine of one or more resources to the given traffic

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flow, but without making the allocated resources available to the given traffic flow, in response to a first request to reserve resources for a given traffic flow (page 1, lines 19-21; where the assurance that the resource reservation is established in both directions before moving to the next phase of accessing the resources, constitutes the holding of resources if reserved for only one traffic flow). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Cisco Systems in the system of Awadallah, because they are both from the same field of endeavor, namely the efficient routing of resources for network sessions. The motivation for combining the teachings lies in the fact that Cisco Systems' teaching adds further efficiency to Awadallah's invention in the event that only one traffic flow has resources allocated for it, and thus would minimize wasted resources by not allowing access to the resources in this case, since a one-sided traffic flow would be useless.

As per claim 2, Awadallah-Cisco teaches the intermediate network device of claim 1 wherein, in response to a second request to reserve resources, the resource reservation engine makes the one or more previously allocated resources available to the given traffic flow (Cisco: page 1, lines 19-21; where the moving to the alerting phase constitutes making the resources available to the traffic flows).

As per claim 10, Awadallah-Cisco teaches that in a computer network having a plurality of intermediate network devices having one or more resources for use in forwarding network traffic, a method for providing end-to-end resource reservations along a route between two or more entities, the method comprising the steps of: receiving a first resource reservation message at a given intermediate network device disposed along the network route, the first resource reservation message identifying a

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traffic flow between the two or more entities requesting a reservation of resources (Awadallah: column 5, lines 25-52); in response to receiving the first resource reservation message, allocating one or more of the device's resources for use in forwarding network traffic between the two or more entities (Awadallah: column 5, lines 53-56); and withholding the allocated resources from being applied to the traffic flow between the two or more entities (Cisco: page 1, lines 19-21). Motivations to combine teachings are discussed in the treatment of claim 1.

As per claim 11, Awadallah-Cisco teaches the method of claim 10 further comprising the step of receiving a second resource reservation message for the traffic flow between the two or more entities (Awadallah: column 5, lines 25-52); and in response to receiving the second resource reservation message, making the allocated resources available for use in forwarding the traffic flow between the two or more entities (Cisco: page 1, lines 19-21).

As per claim 16, Awadallah-Cisco teaches a method for providing resource reservations along a route through a computer network between two or more entities, the method comprising the steps of: generating a first resource reservation message identifying a traffic flow and requesting a reservation of resources (Awadallah: column 5, lines 25-52), but does not specifically teach the message to include a reservation flag, where the flag is able to assert that resources will be allocated but not made available to the traffic flow. It would have been obvious to one of ordinary skill in the art at the time of the invention to include this limitation. The use of flags used to alert the devices of certain states is well known in the art (as in Chiu, paragraph 74). The motivation for adding this functionality lies in the fact that the network device must "know" that a

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second request for resources has not been made, preventing the flow from proceeding to making the resources available, and thus there exists an obvious need for flags to alert the system of this.

As per claim 17, Awadallah-Cisco teach the method of claim 16 on the basis of obviousness, further comprising the steps of generating a second resource reservation identifying the traffic flow (Awadallah: column 5, lines 25-52), but does not specifically teach the existence of a flag in the message such that the existence and disabling of the flag governs that the allocated resources will be made available for application to the traffic flow. It would have been obvious to one of ordinary skill in the art at the time of the invention to include this limitation, as the use of flags used to alert the devices of certain states is well known in the art (as in Chiu, paragraph 74). The motivation for adding this functionality lies in the fact that the network device must “know” that a second request for resources has been made, and the flow can proceed to making the resources available, and thus there exists an obvious need for flags to alert the system of this.

Claims 3-9 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Awadallah (U.S. 6,449,251) in view of Cisco Systems Incorporated (VoIP Call Admission Control Using RSVP), in further view of Chiu (U.S. 6,744,767).

As per claim 3, Awadallah-Cisco teaches the intermediate network device of claim 2, but does not specifically teach the resource reservation engine placing the reservation in a resources allocated state, in response to the first reservation request. Chiu teaches this limitation (column 5, lines 16-32). It would have been obvious to one

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of ordinary skill in the art at the time of invention to include this limitation, as taught by Chiu in the system of Awadallah-Cisco. The motivation for doing so lies in the fact that all teachings are from the same field of endeavor, namely the efficient routing of resources for network sessions.

As per claim 4, Awadallah-Cisco-Chiu teaches the intermediate network device of claim 3 wherein, in response to the second reservation request, the resource reservation engine transitions the reservation from the resources allocated state to a resources available state (Cisco: page 1, lines 19-21; where the holding of the resources until a second request is made and then moving to the alerting phase constitutes the transition from a resources allocated state to a resources available state).

As per claim 5, Awadallah-Cisco-Chiu teaches the intermediate network device of claim 4, wherein: the resource reservation engine utilizes the Resource Reservation Protocol (RSVP) specification standard (Cisco: page 1, lines 16-23); and the first and second reservation requests are RSVP Reservation messages (Cisco: page 2, where the existence of the RSVP Reservation messages is obvious, based on the fact that communications between routers and calls are accomplished through the RSVP standard). All motivations to combine teachings are treated in the discussion of claim 1.

As per claim 6, Awadallah-Cisco-Chiu teaches the intermediate network device of claim 5, but does not specifically teach the use of flags to signify whether two reservation requests are made. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the limitation of alerting the network device that two reservation requests are made, such that the resources can then be rendered available. The use of flags used to alert the devices of certain states is well known in the art (as in

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Chiu, paragraph 74). The motivation for adding this functionality lies in the fact that the network device must “know” that a second request for resources has been made, and the flow can proceed to making the resources available, and thus there exists an obvious need for flags to alert the system of this.

As per claim 7, Awadallah-Cisco-Chiu teaches the intermediate network device of claim 6 wherein the traffic flow carries voice information (Awadallah: column 1, lines 29-38).

As per claim 8, Awadallah-Cisco-Chiu teaches the intermediate network device of claim 4, wherein packets corresponding to the given traffic flow are forwarded by the device in a best efforts manner while in the resources allocated state (Awadallah: column 4, lines 38-41).

As per claim 9, Awadallah-Cisco-Chiu teaches the intermediate network device of claim 8 wherein packets corresponding to the given traffic flow are forwarded with the one or more allocated resources while in the resources available state (Awadallah: column 5, lines 53-56).

As per claim 12, Awadallah-Cisco-Chiu teaches the method of claim 11, further comprising the steps of: in response to receiving the first resource reservation message, placing the requested reservation in a resources allocated state (Chiu: column 5, lines 16-32); and in response to receiving the second resource reservation message, transitioning the requested reservation from the resources allocated state to a resources available state (Cisco: page 1, lines 19-21; where the holding of the resources until a second request is made and then moving to the alerting phase constitutes the transition from a resources

allocated state to a resources available state). Motivations to combine teachings are discussed in the treatment of claim 3.

As per claim 13, Awadallah-Cisco-Chiu teaches the method of claim 12, wherein the first and second resource reservation messages are RSVP Reservation messages (Cisco: page 2, where the existence of the RSVP Reservation messages is obvious, based on the fact that communications between routers and calls are accomplished through the RSVP standard).

As per claim 14, Awadallah-Cisco-Chiu teaches the method of claim 13, wherein the first and second Resv messages each include a message header (Awadallah: column 1, lines 51-67; Chiu: column 1, lines 43-50), but does not specifically teach the use of flags disposed in the header. It would have been obvious to one of ordinary skill in the art to include the limitation of alerting the network device that two reservation requests are made, such that the resources can then be rendered available. The use of flags used to alert the devices of certain states is well known in the art (as in Chiu, paragraph 74). The motivation for adding this functionality lies in the fact that the network device must “know” that a second request for resources has been made, and the flow can proceed to making the resources available, and thus there exists an obvious need for flags to alert the system of this.

As per claim 15, Awadallah-Cisco-Chiu teaches the method of claim 14, but does not specifically teach the situation in which the steps of allocating resources, withholding resources, and making allocated resources available are performed at each intermediate network device disposed along the route between the two or more entities. It would have been obvious to one of ordinary skill in the art at the time of the invention to include this

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limitation, as the enablement of all components in a system to possess a certain characteristic is not patentably distinct.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanim Hossain whose telephone number is 703/605-1228 until October 18, 2004, after which it becomes 571/ 272-3881. The examiner can normally be reached on 8:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 703/305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703/872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tanim Hossain
Patent Examiner
Art Unit 2141


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